

NANO-MULTILAYERED STRUCTURES, COMPONENTS AND  
ASSOCIATED METHODS OF MANUFACTURE

ABSTRACT OF THE DISCLOSURE

Nano-multilayered structures, components and associated methods of manufacture suitable for use in high-temperature applications including a plurality of metallic alloy layers, wherein the thickness of each of the plurality of metallic alloy layers is on a nano scale, and a plurality of ceramic oxide layers disposed between the plurality of metallic alloy layers in an alternating manner, wherein the thickness of each of the plurality of ceramic oxide layers is on a nano scale.